

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: METALUX

Report Number: P295067

Luminaire Tested: **24CZ2-65HE-HRP-UNV-L930-CD1-U**

Issue Date: 12/2/2019

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P295067
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65HE-HRP-UNV-L930-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (392) 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4224.0 lumens
Efficiency: N/A
Efficacy: 86.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

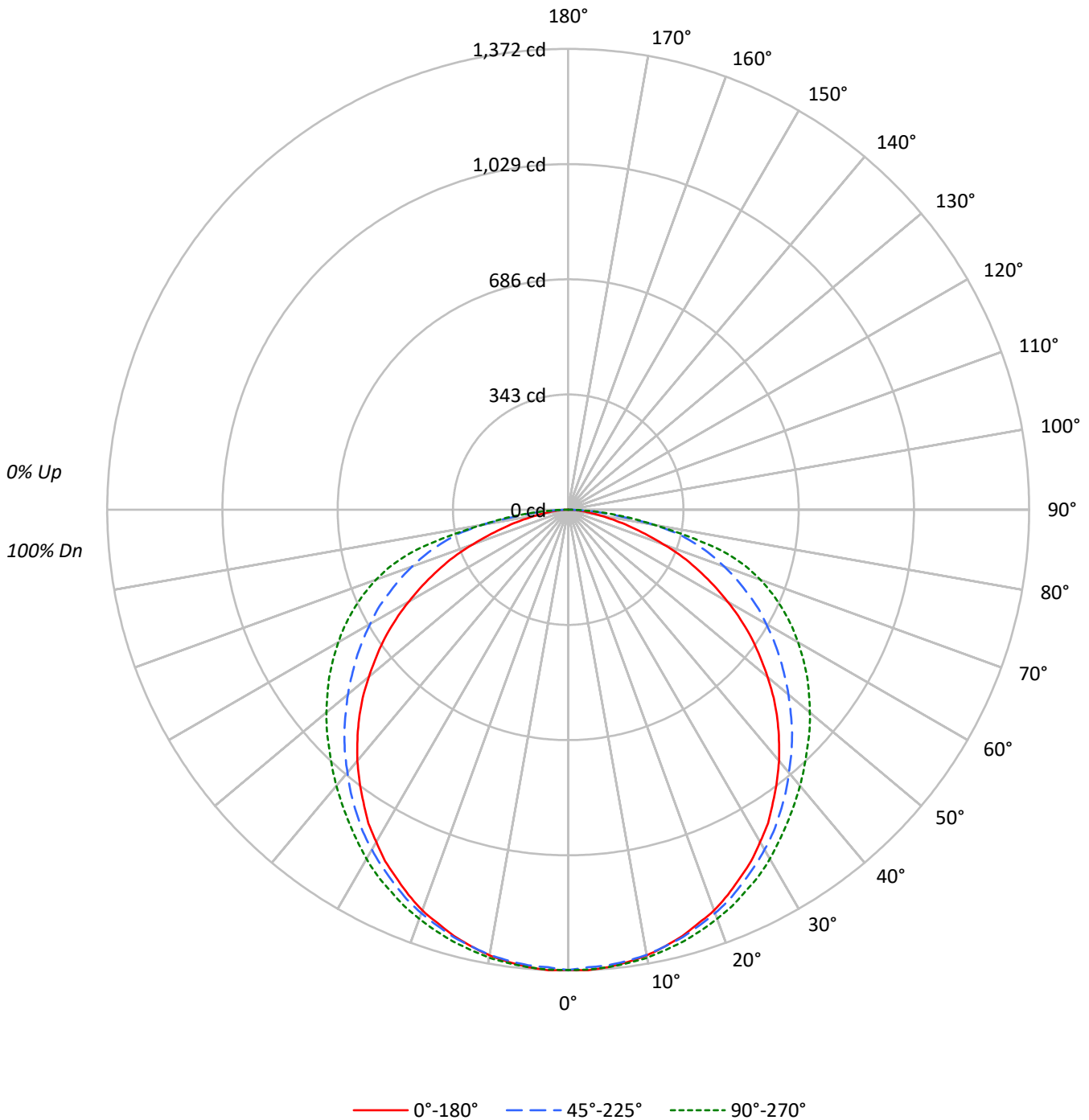
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20			
RC	80				70				50				30				10	0		
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50	30	10	0
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	108	103	98	94	105	101	96	93	96	93	90		92	90	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	24		35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1844	1844	1844
5°	1846	1839	1846
10°	1841	1839	1851
15°	1830	1835	1852
20°	1818	1831	1856
25°	1796	1822	1859
30°	1775	1816	1865
35°	1746	1807	1868
40°	1714	1795	1885
45°	1676	1793	1915
50°	1621	1792	1966
55°	1564	1804	2037
60°	1475	1832	2127
65°	1362	1875	2246
70°	1190	1941	2393
75°	965	2041	2473
80°	713	2001	2001
85°	546	1474	1666



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.8	3.1
10°-20°	372.8	8.8
20°-30°	567.6	13.4
30°-40°	689.2	16.3
40°-50°	728.1	17.2
50°-60°	687.0	16.3
60°-70°	571.3	13.5
70°-80°	375.8	8.9
80°-90°	102.4	2.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1070.2	25.3
0°-40°	1759.3	41.7
0°-60°	3174.5	75.2
0°-90°	4224.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4224.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1370	1370	1370	1370	1370	
5°	1367	1367	1362	1367	1367	130
15°	1314	1316	1317	1330	1330	371
25°	1210	1217	1227	1248	1252	558
35°	1063	1075	1100	1128	1137	665
45°	881	898	942	988	1006	678
55°	667	695	769	842	868	594
65°	428	478	589	676	706	423
75°	186	271	393	465	476	200
85°	35	78	96	106	108	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1370.5	1370.5	1370.5	1370.5	1370.5
2.5°	1372.2	1370.5	1363.4	1370.5	1370.5
5°	1366.9	1366.9	1361.6	1366.9	1366.9
7.5°	1358.1	1358.1	1354.6	1361.6	1361.6
10°	1347.5	1347.5	1345.7	1354.6	1354.6
12.5°	1331.6	1333.3	1331.6	1342.2	1342.2
15°	1313.9	1315.7	1317.4	1329.8	1329.8
17.5°	1290.9	1294.4	1298.0	1312.1	1313.9
20°	1269.7	1271.4	1278.5	1294.4	1296.2
22.5°	1241.4	1246.7	1255.5	1271.4	1276.7
25°	1209.6	1216.6	1227.2	1248.5	1252.0
27.5°	1179.5	1184.8	1198.9	1221.9	1229.0
30°	1142.4	1151.2	1168.9	1191.9	1200.7
32.5°	1107.0	1115.8	1137.0	1161.8	1168.9
35°	1062.8	1075.2	1099.9	1128.2	1137.0
37.5°	1020.3	1032.7	1062.8	1094.6	1105.2
40°	976.1	990.3	1022.1	1059.2	1073.4
42.5°	928.4	947.8	983.2	1023.9	1039.8
45°	880.6	898.3	942.5	988.5	1006.2
47.5°	829.4	850.6	898.3	953.1	974.4
50°	774.5	801.1	855.9	916.0	939.0
52.5°	719.7	749.8	811.7	878.9	903.6
55°	666.7	695.0	769.2	841.7	868.3
57.5°	608.3	643.7	725.0	802.8	829.4
60°	548.2	587.1	680.8	762.2	790.5
62.5°	488.1	532.3	638.4	719.7	749.8
65°	427.9	477.5	588.9	675.5	705.6
67.5°	369.6	424.4	542.9	629.5	659.6
70°	302.4	371.4	493.4	578.3	608.3
72.5°	240.5	320.1	445.6	525.2	551.7
75°	185.7	270.6	392.6	465.1	475.7
77.5°	136.2	221.0	337.8	362.5	364.3
80°	92.0	176.8	258.2	254.6	258.2
82.5°	60.1	132.6	162.7	182.1	183.9
85°	35.4	77.8	95.5	106.1	107.9
87.5°	17.7	26.5	33.6	35.4	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)